## AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 6, line 1, with the following:

The present invention is directed to a method and system for compensating for color variations due to thermal differences in LED based lighting systems. The method and system of the invention characterizes the LEDs to determine what PWM is needed at various operating temperatures to achieve a desired resultant color. The characterization data is then stored in the microprocessor either in the form of a correction factor or as actual data. When an operating temperature that is different from a calibration temperature is detected, the characterization data is used to adjust the PWM of the LEDs to ~~restores~~ restore the LEDs to the desired resultant color.

Please replace the paragraph beginning on page 7, line 11, with the following:

In general, in still another aspect, the invention is directed to a method of calibrating an LED based lighting system that has at least one LED array, wherein same color LEDs are electrically connected to form LED channels. The method comprises the steps of stabilizing the LED channels, maximizing an intensity level of one of the LED channels, and adjusting an intensity level of at least one other LED channel until a predetermined target color is achieved. The method further includes the step of repeating the above steps after a predetermined amount of time.

Please replace the paragraph beginning on page 14, line 6, with the following:

Note that the pulse width versus temperature curves in Figure ~~4~~ 5 are plotted using data from several temperatures. In some embodiments, it is possible to obtain curves that are based on only two temperatures, for example, the calibration temperature (e.g., 55o C) and another temperature. Advantageously, the other temperature may be any temperature that the LEDs pass through as they are warming up to the calibration temperature. An estimate of the pulse width versus temperature curve may then be extrapolated from the two data points using any appropriate numerical method.

Please replace the paragraph bridging pages 14-15 with the following:

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Referring now to Figure 6, a method 600 representing an exemplary implementation of the PWM with thermal compensation algorithm 402 is shown. The first step 602 in the method ~~and~~ is to perform a warm-up routine that initializes the microprocessor and the arrays. At step 604, a desired resultant color is received from a global control unit. An appropriate PWM scheme for the resultant color is selected at step 606, and the LEDs are modulated on a per channel basis with the selected PWM. At step 608, the operating temperature is measured. In some embodiments, a brief stabilization period may be implemented to allow the LEDs to settle before measurement of the operating temperature. The difference between the operating temperature and calibrated temperature is measured in step 610. If the temperature difference is above a predetermined threshold value, then the pulse width of the PWM is adjusted based on the temperature difference at step 612. In some embodiments, the amount of adjustment may be determined using a correction factor. In other embodiments the amount of adjustment may be determined using a look-up table. At step 614, the adjusted PWM is applied to the LEDs (on a per channel basis). Thereafter, the method 600 returns to step 608 to continue monitoring the operating temperature.